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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/574,125	06/13/2006	Per Holm	20481/0206897-US0	5556

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EXAMINER	
WESTERBERG, NISSA M	
ART UNIT	PAPER NUMBER
1618	
MAIL DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/574,125	HOLM ET AL.	
	Examiner	Art Unit	
	Nissa M. Westerberg	1618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 - 57, 59, 64 - 67, 69, 70* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 - 57, 59, 64 - 67, 69, 70* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *6/13/06*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities: trademarks are present on pages 26 and 27 but are not accompanied by generic terminology. The trademarks should be capitalized wherever they appear and be accompanied by the generic name for the drug.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks

Appropriate correction is required.

Claim Objections

2. Claim 24 is objected to because of the following informalities: it appears that a typographical error is present in the word "analogues" present in line 7. The examiner believes "analogous" was the intended word. Appropriate correction is required.

3. Claim 37 is objected to under 37 CFR 1.75(c), as being a substantial duplicate of claim 35. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is

proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

4. Claims 43 and 46 are objected to because of the following informalities: it appears that a typographical error is present in the word "abut" present in lines 5 and 7 of claim 43 and line 3 of claim 46. Appropriate correction is required.

Double Patenting

5. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

6. Claims 1 – 3, 5 – 8, 11 – 14, 16 – 19, 22 – 24, 26, 27, 36, 43, 45, 47, 48, 53 and 67 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 – 18, 33 – 36, 38 – 42 and 44 of U.S. Patent No. 7,217,431. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claimed process used to prepare a particulate material is the same. Specific durations of effectiveness of the active ingredient or dissolution parameters of the prepared product, present in the claims of the instant application, are not recited in the claims of US'431.

If these properties are not inherently provided by the compositions claimed in US'431, it would have been obvious to one of ordinary skill in the art at the time of the instant invention to use the disclosed process to prepare a dosage form with the claimed release profile. The duration of the effect of the active ingredient, and the amount and timing of the dissolution of the dosage form is dependent on the active

ingredient, any degradation that might occur after ingestion, the pharmacokinetic parameters of the particular drug as well as side effects that may occur all will affect the desired release properties of the dosage form. Therefore, the duration of therapeutic, prophylactic and/or diagnostic effect and the dissolution rate *in vitro* or *in vivo* are results effective parameters. Optimization of results effective parameters is a routine practice that would be obvious for a person of ordinary skill in the art.

7. Claims 1 – 3, 5 – 8, 11 – 14, 16 – 19, 22 – 24, 26, 27, 36, 43, 45, 47, 48, 53 and 67 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 57 – 77, 90 – 95, 99 – 105 and 107 – 116 of copending Application No. 11/711,965. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claimed process used to prepare a particulate material is the same. Specific durations of effectiveness of the active ingredient or dissolution parameters of the prepared product, present in the claims of the instant application, are not recited in the claims of US'965.

If these properties are not inherently provided by the compositions claimed in US'965, it would have been obvious to one of ordinary skill in the art at the time of the instant invention to use the disclosed process to prepare a dosage form with the claimed release profile. The duration of the effect of the active ingredient, and the amount and timing of the dissolution of the dosage form is dependent on the active ingredient, any degradation that might occur after ingestion, the pharmacokinetic parameters of the particular drug as well as side effects that may occur all will affect the

desired release properties of the dosage form. Therefore, the duration of therapeutic, prophylactic and/or diagnostic effect and the dissolution rate *in vitro* or *in vivo* are results effective parameters. Optimization of results effective parameters is a routine practice that would be obvious for a person of ordinary skill in the art.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 112 2nd Paragraph

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claims 1 – 3, 5 – 8, 11 – 14, 16 – 19, 22 – 24, 26, 27, 36, 43, 45, 47, 48, 53 and 67 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The phrase "such as, e.g." renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. In claim 67, the word "including" renders this claim indefinite for the same reason. See MPEP § 2173.05(d).

10. Claims 1 – 3, 5 – 8, 11 – 14, 16 – 19, 22 – 25 and 47 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. These contain the limitation "at least about". "At least" is a minima and all possible values

above the recited value are encompassed. "About" indicates a range centered on the recited value. Therefore, what values are included in the range "at least about" cannot be determined.

11. Claims 26 – 28, 46 and 48 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. These claims contain the limitation "at the most about". "At the most" is a maxima and all possible values below the recited value are encompassed. "About" indicates a range centered on the recited value. Therefore, what values are included in the range "at the most about" cannot be determined.

12. Claims 35 and 37 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The limitation "step iii)" is recited in line 2. There is insufficient antecedent basis for this limitation in the claim. The steps in claim 1 are not identified by tags such as iii). In part because of the lack of antecedent bases, it is also unclear what the added step is doing. After spraying of the first composition to apply it to the second composition, the second composition is no longer exposed. Therefore, how the release-rate modifier is applied to the second composition after it has already been coated with the first composition is not clear.

13. Claim 25 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The term "plain tablet" is a relative term which renders the claim indefinite. The term "plain tablet" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. It is not clear what feature(s) are not present in a tablet to render it a plain tablet. For example, a plain tablet could be one in which identifying information is not present on the exterior of the tablet or one in which not additional coatings layers, such as flavoring or enteric-coatings are applied.

14. Claims 55, 57 and 69 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. A Markush group is a closed list of items from which a particular element may be selected from. The Markush groups in these claims are open due to the final item of the list being "and the like" in claim 55 and "etc." in claims 57 and 69. Additionally, the term “and the like” is a vague and indefinite term. The term “or like material” in the context of the limitation “coke, brick, or like material” was held to render the claim indefinite since it was not clear how the materials other than coke or brick had to resemble the two specified materials to satisfy the limitations of the claim. Ex parte Caldwell, 1906 C.D. 58 (Comm'r Pat. 1906). **MPEP 2173.05(b)**

Claim Rejections - 35 USC § 102/103

15. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

16. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

17. Claims 1 – 34, 36, 38 – 57, 59, 64 – 67, 69 and 70 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Holm et al. (WO 03/004001).

Holm et al. discloses a process of preparing compositions comprising a therapeutically and/or prophylactically active substance with improved *in vitro* dissolution and/or shelf life (p 1, ln 5 – 13). This particulate material is prepared by a process in which a first composition, a carrier in a liquid form with a melting point of about 5°C or higher, is sprayed on a second composition, whose temperatures is at or below the melting point of the carrier of the first composition, and then mechanically working the second compositions after the second composition has been sprayed with the first composition (p 1, ln 33 – p 2, ln 14).

The carrier described by Holm et al. corresponds to the first composition of the instant claims. Suitable carriers include melt binder of solid solvents, including hydrophobic carriers that are normally used in the manufacture of a modified release pharmaceutical (a release-rate modifier, p 3, ln 25 – 27, 34 – 35). Specific examples of suitable hydrophobic carriers are given on p 4, ln 19 – 28). The carrier can further comprise additional carriers, surfactants (surface active agents), one or more therapeutically and/or prophylactically active substances and/or one or more pharmaceutically acceptable excipients (p 6, ln 13 – 19). Other additives can include antioxidants and stabilizing agents (p 8, ln 20 – 27). The viscosity of this solution must be suitable so that it is not so thick as to clog the delivery nozzle (p 9, ln 21 – 25). Generally, the viscosity of the carrier is at the most 800 mPas at a temperature of at most 100°C (p 9, ln 25 – 31). In the resulting material, the concentration of the carrier can vary widely, from about 5% to about 95% w/w with many intermediate ranges disclosed (p 9, ln 33 – p 10, ln 5).

It is not required that an aqueous process be used, and the agglomeration process can take place under water-free or substantially water-free conditions (p 10, ln 33 – p 11, ln 8).

The active substances suitable for use in the particulate matter is broad, and encompasses drug substance, hormones, genes or gene sequences, antigen-comprising material, proteins, peptides, vitamins, minerals, lipids, carbohydrates and mixtures thereof (p 11, ln 19 – 28). Peptides, proteins, lipids and carbohydrates are active substances which are subject to enzymatic degradation in the gastrointestinal

tract. Compounds with a variety of degrees of water solubility at 25°C and a pH 7.4 are also suitable for use in the instant invention (p 12, ln 8 – 16). Specific drugs are also exemplified. The drugs verapamil (p 14, ln 6) and propranolol (p 14, ln 19) are drugs which are subject to a first pass effect. The drugs clozapine (p 16), haloperidol (p 13, ln 30), diazepam (p 17), midazolan and sertralin (p 18) are all subject to food effects.

The second composition should be at a temperature that is lower than the melting point of the first solution (p 20, ln 11 – 19). The second composition can comprises pharmaceutically and/or cosmetically acceptable excipients and/or therapeutically or prophylactically active substances (p 21, ln 1 – 3). The excipients can include fillers, diluents, disintegrants, binders, lubricants, acidifying agents, alkalizing agents, antioxidants, buffering agents, coloring agents solubilizing agents and flavors (p 21, ln 12 – 20). Among the exemplified filler, diluents and binders are release rate modifiers such as hydroxypropylmethyl cellulose (HPMC; p 21, ln 22 – p 22, ln 2).

The process can be carried out in a high or low shear mixer or in a fluid bed. A fluid bed is exemplified as a one-pot method by the instant application (paragraph [0059] of the PGPub). The carrier is heated to a temperature above the melting point (p 23, ln 32 – 33). Normally, the spraying is performed through a spraying device equipped with a means to control the temperature (p 25, ln 17 – 18). The material obtained by this process general has a geometric weight mean diameter of ≥ 10μm but can be larger (p 25, ln 20 – 28). The particulate matter is excellent for further processing (p 26, ln 6 – 10) and can be coated with a variety of coatings, including a film coating, modified release coating, protective coating or enteric coating (p 26, ln 12 – 14).

Relevant pharmaceutical preparations made using the particulate material can be solid, semi-solid, or liquid (p 27, ln 20 – 23) and take form such as tablets, capsules, sachets (p 27, ln 28), solutions, dispersions, emulsions, suspensions, mixtures or syrups (p 27, ln 33 – 34).

The process of the materials used by both Holm et al. and the instant application are the same. However, the prior art does not discloses information relating to the *in vitro* dissolution rate or the release of the active ingredient in the gastrointestinal tract of a mammal of the products produced by the process. Some pharmacokinetic data is presented (for example, p 55) but the duration of the therapeutic, prophylactic or diagnostic effect is not disclosed. If these properties are not inherently provided by the compositions prepared by Holm et al., it would have been obvious to one of ordinary skill in the art at the time of the instant invention to use the disclosed process to prepare a dosage form with the claimed release profile. The duration of the effect of the active ingredient, and the amount and timing of the dissolution of the dosage form is dependent on the active ingredient, any degradation that might occur after ingestion and , the pharmacokinetic parameters of the particular drug will affect the desired release properties of the dosage form. Therefore, the duration of therapeutic, prophylactic and/or diagnostic effect and the dissolution rate *in vitro* or *in vivo* are results effective parameters. Optimization of results effective parameters is a routine practice that would be obvious for a person of ordinary skill in the art.

Claim Rejections - 35 USC § 103

18. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

19. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

20. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

21. Claims 1, 35 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Holm et al. as applied to claims 1 – 34, 36, 38 – 57, 59, 64 – 67, 69 and 70 above, and further in view of Eichel et al. (US 5,026,559).

Holm et al. discloses a process of preparing an agglomerate by the application of a first composition in a liquid form to a second composition that is a solid whose temperature is below the melting temperature of the liquid ingredient in the first composition. A variety of coatings, such as an enteric coating, can be applied after the first composition has been applied to the second composition.

Holm et al. does not explicitly state that the additional coating layer can be applied by spraying to the agglomerate.

Eichel et al. discloses that an enteric coating can be formed in a fluid bed spray coating process in which the enteric coating material is applied to a core containing the drug (col 7, ln 19 – 23). After drying, an additional coating layer can be applied using the same process (col 7, ln 23 – 28).

It would have been obvious to one of ordinary skill in the art at the time of the instant invention to prepare a particulate material containing active ingredient with a coating layer, as taught by Holm et al., and to apply the outer coating layer by a spraying the particulate material, a suitable method for the application of outer coatings as taught by Eichel et al.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nissa M. Westerberg whose telephone number is (571)270-3532. The examiner can normally be reached on M - F, 8 a.m. - 4 p.m. ET. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G. Hartley can be reached on (571) 272-0616. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael G. Hartley/
Supervisory Patent Examiner, Art Unit 1618

NMW